

# Indonesia - Mahakam Hilir PSC

East Kalimantan onshore appraisal opportunity with rapid commercialisation



Cue Energy holds 100% equity in the Mahakam Hilir PSC in the Kutei Basin, East Kalimantan and is seeking a partner to share in the Naga Utara 4 (NU-4) gas appraisal well opportunity and further exploration. Data shows potential for an immediate 50 Bcf of prospective gas resource in an area adjacent to the currently producing Sambutan gas field, with further exploration potential to yield estimated resources > 100Bcf.

- Located onshore in the Kutei Basin, East Kalimantan, a proven petroleum province
- Naga Utara 4 (NU-4) well planned for late 2019 as appraisal of 100m interpreted gas pay in the 1930s Sambutan-8 well
- NU-4 location is 300m from the producing Sambutan gas field with access to infrastructure and market
- Low cost well (~\$2m DHC) to 3,000 feet, with short lead time to production and attractive small field economics
- Up to 50 Bcf prospective recoverable in greater Naga Utara structure with further upside expected to be > 100 Bcf in the rest of the Permit
- Cue 100% Participating Interest seeking Operator or non Operator partner

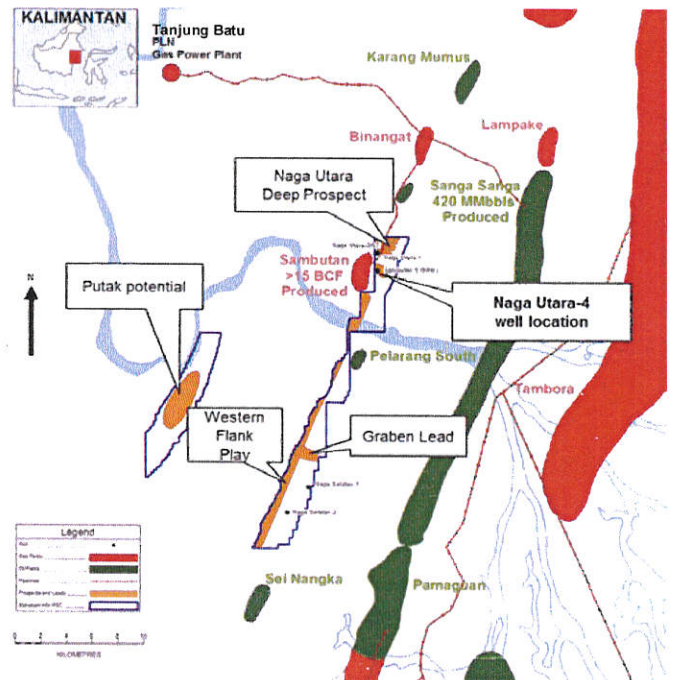


Fig 1. Mahakam Hilir PSC location

## Proven Source and Reservoir Presence

Current production data from the Sambutan Field and surrounding well data demonstrates access to charge and the presence of good quality deltaic reservoir sands.

The Sambutan field has produced 17 bcf up to the end of 2015 from 3 wells since the most recent development in 2007

NU-4 will test the top delta sands in the normally pressured section above 3000ft. Follow up wells will address the deeper potential within the pressured pro-delta section.

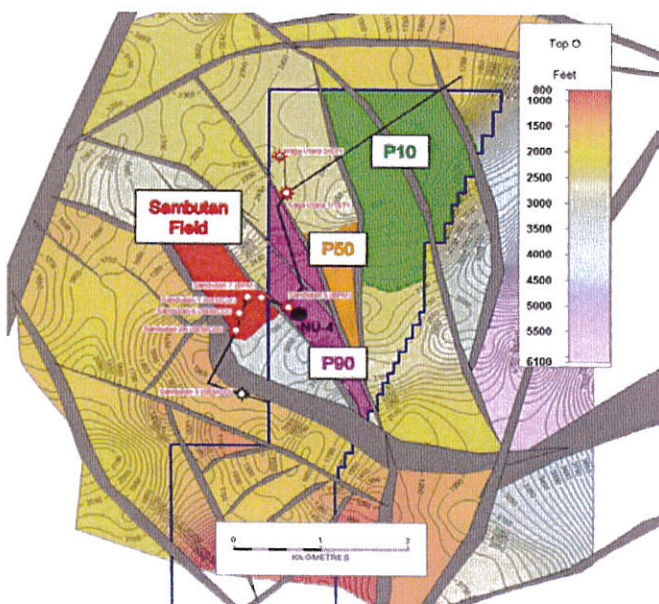


Fig 2. Greater Naga Utara structural Map

## Disclaimer and Cautionary Statement

Please refer to the Cue Energy ASX announcement dated 2 April 2019, for Disclaimer and Prospective Resources Cautionary Statement associated with this flyer



### Gravity/ Gradiometry and Structural Interpretation

An airborne gravity/ gradiometry survey was acquired and processed over the main Eastern area of the permit in 2016. The Pelarang Anticline was imaged with unprecedented precision, providing detail not previously seen on existing 2D seismic data. Anomalous low gravity was recognised in the Northern Mahakam Hilir area, which corresponds with the Sambutan Field.

Gravity modelling of the data revealed a structural low, positioned along the axis of the anticline.

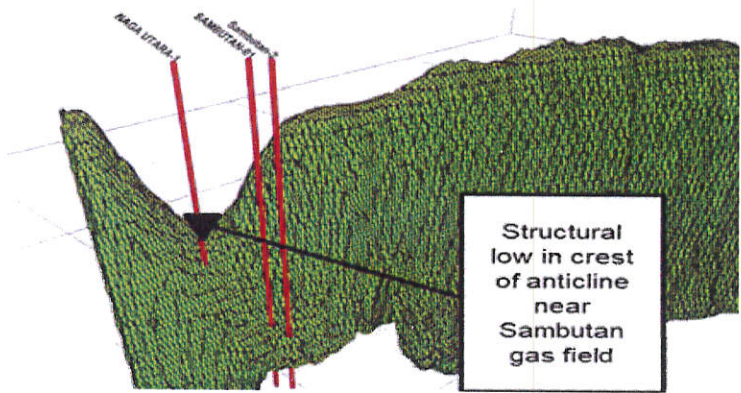
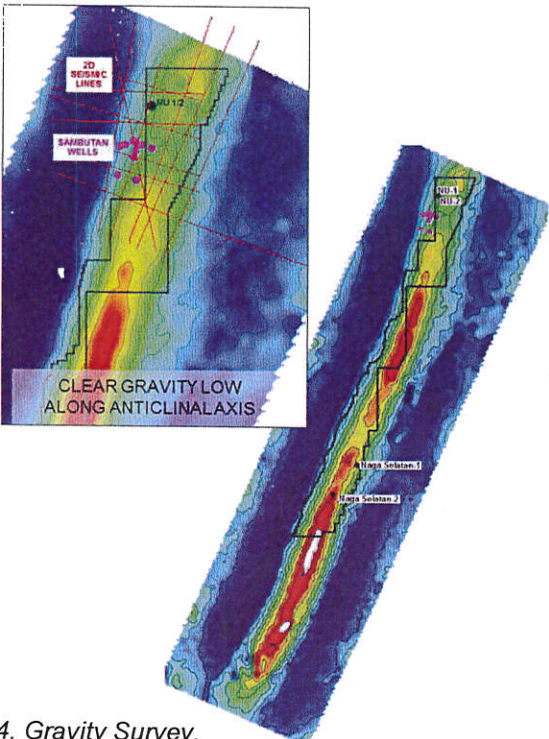


Fig 3. Gravity Model.



The modelled structural low is interpreted as a local graben, created by divergent wrench movement, which acted as an accommodation and preservation mechanism for the deposition of high quality deltaic sediments found in the Sambutan Field/ Naga Utara area.

The current structural model shows that the Sambutan Field and the Naga Utara prospect are part of the same graben feature. Naga Utara prospect is expected to contain up to 50 Bcf recoverable gas resource.

Fig 4. Gravity Survey.

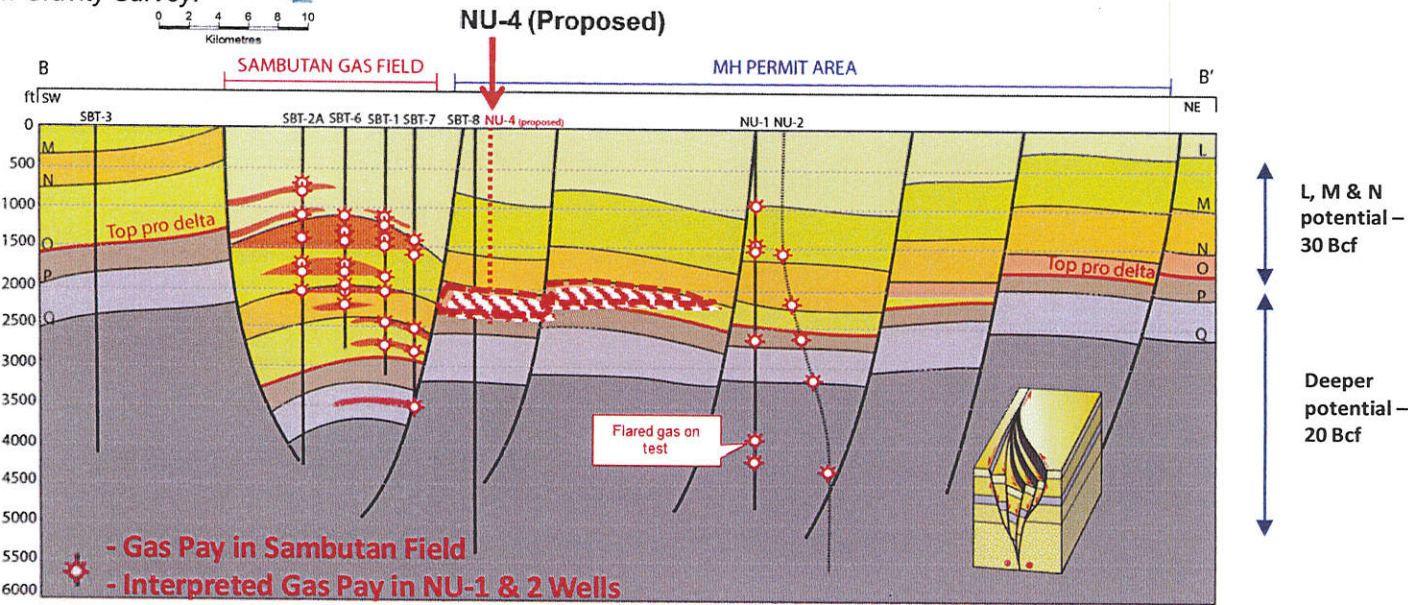


Fig 5. Schematic structural interpretation.



# Mahakam Hilir PSC

## East Kalimantan, Indonesia



### Well information

A new stratigraphic correlation across Sambutan Field and Naga Utara Prospect area shows that the Sambutan Field and the Naga Utara prospect are part of the same graben feature and deltaic depositional system.

The Sambutan 7 (SBT-7) and Sambutan 8 (SBT-8) wells were drilled in the 1930s.

SBT-7 is 100m West of the Mahakam Hilir PSC boundary and within the producing Sambutan Field. Analysis of the logs and drilling reports shows that SBT-7 flow tested 11 mmcf/d from 5 intervals but was not put into production, likely due to the low liquids rate and no demand for gas production.

SBT-8 has been identified by Cue as being within the Mahakam Hilir PSC boundary. Analysis of the well logs shows 100m of interpreted gas pay at 620m depth. This sand was not tested for the most likely reason that there was a lack of gas demand in the 1930s.

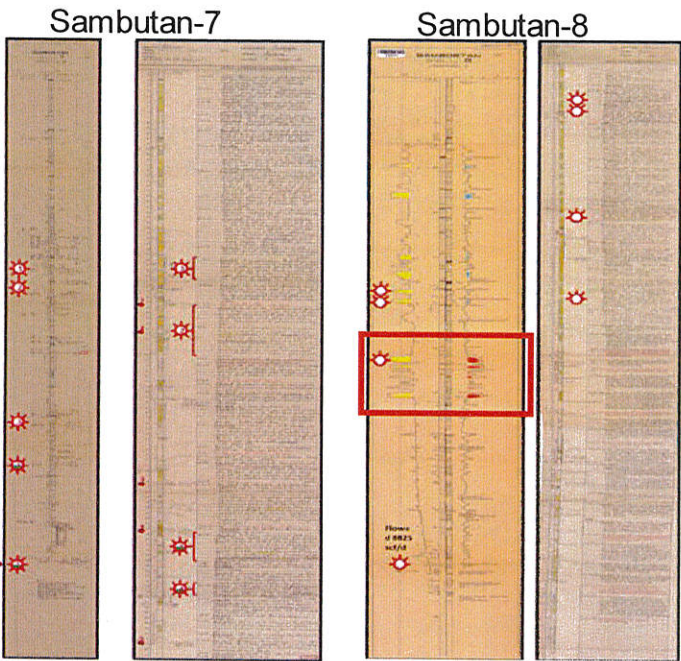


Fig 6. 1930's well logs with gas flows and interpreted pay

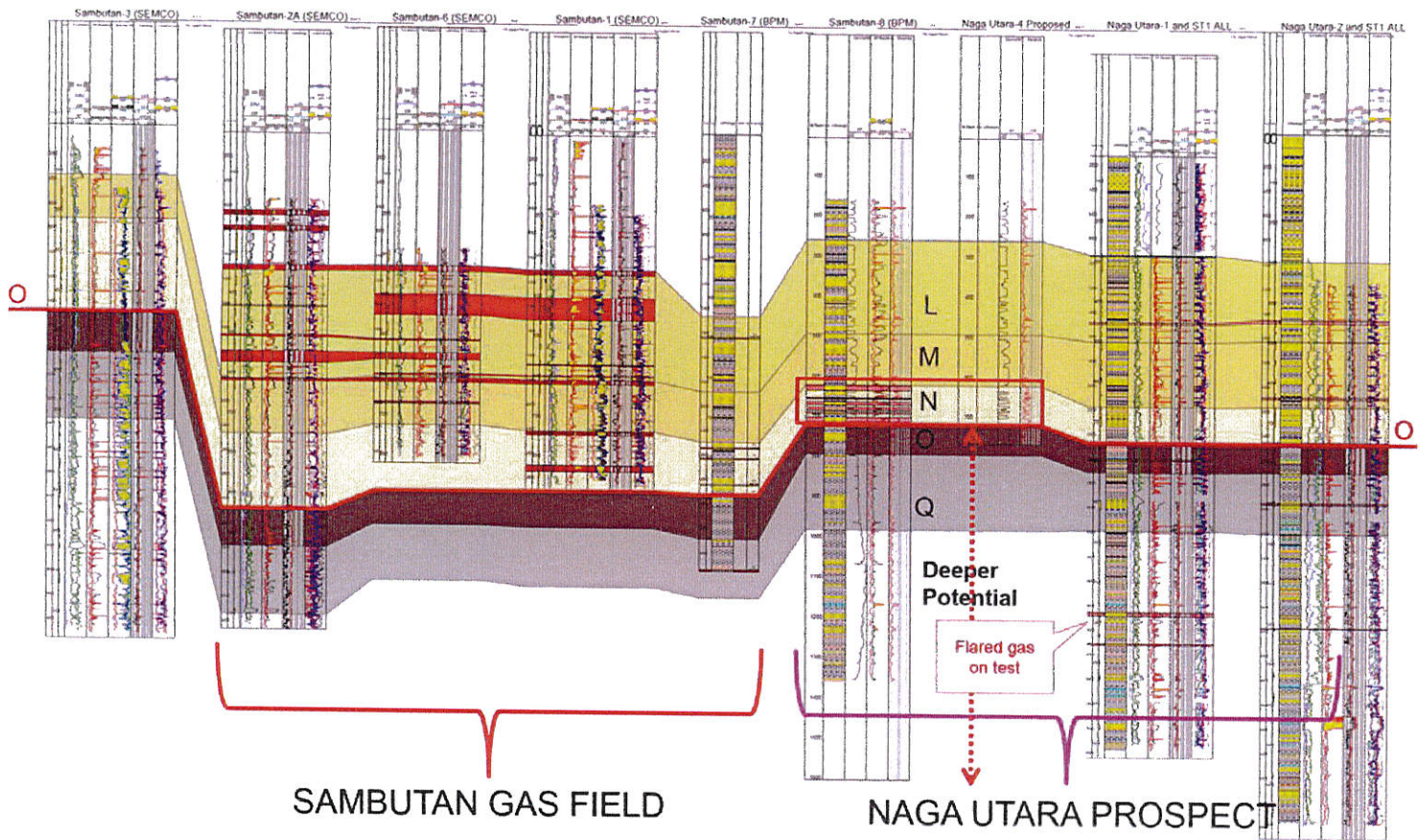


Fig 7. Structural Cross Section through Sambutan and Naga Utara wells



### Seismic Reprocessing and Well Analysis

Reprocessing of 234 km of available 2D seismic lines has resulted in a significant uplift in imaging quality. All available lines within the target area were reprocessed up to PSDM during 2017.

The enhanced imaging of the reprocessed lines confirms the previously unrecognised normal fault offsets and this confirms the presence of a pull apart graben which controls the depositional focus of good deltaic reservoirs as seen in the Sambutan Field.

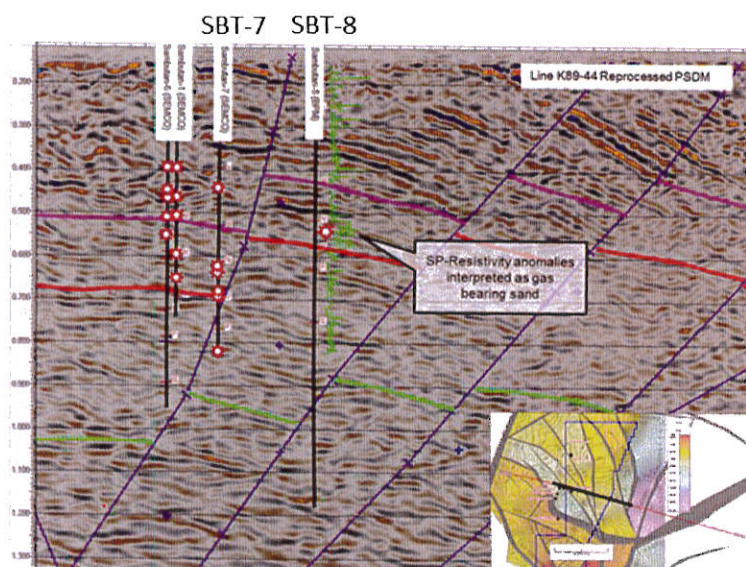


Fig 8. reprocessed 2D line through existing wells

A consistent petrophysical analysis was carried out on the newly acquired data from 4 wells in the Sambutan Field, and existing well data from Naga Utara 1 and 2 and the Sambutan 8 wells. This has increased the confidence in attributing reservoir presence, quality, and distribution across the Naga Utara prospect area and also the presence of hydrocarbons in Sambutan-8.

### Permit Status

Cue holds 100% equity and is Operator. All firm commitments have been completed during the initial exploration period.

The permit has been designated a 'blue' status rating as the exploration expenditure has substantially exceeded requirements. The current extension period expires in May 2020.

Naga Utara-4 is the proposed well and will be drilled in the greater Naga Utara area. If successful, a second well would most likely be drilled in the same area after analysis of the NU-4 results. In a dry hole scenario relinquishment of the permit with no penalty is an option.

### Commercialisation

The Mahakam Hilir PSC is adjacent to the producing Sambutan Field, which has established gas connections to the PLN gas fired power station in Tanjung Batu. The power station is dual fuel sourced using both gas and the more costly high speed diesel. The current estimated demand for replacing the high speed diesel with gas is 40 MMSCFD.

The proposed Naga-Utara 4 well, designed to be Put in Production (POP) in the success case, is less than 1km from the closest connection point to the Sambutan system allowing for rapid commercialisation to an established market. Gas price is expected to follow the government regulated price of 11.5% ICP.

The greater Naga Utara Field, containing up to 50 Bcf of gas resource also has nearby, direct access to the Sambutan infrastructure.

The PSC has significant cost recovery available which enhances development economics.

### Opportunity

Cue is inviting interested parties to become partners in the Mahakam Hilir PSC and is open to discussing terms and operatorship with appropriately qualified parties.

#### Contact

**Matthew Boyall**  
CEO

E: [matthew.boyall@cuenrg.com](mailto:matthew.boyall@cuenrg.com)

P: +61 3 8610 4004

M: +61 468 405 366

**Witan Odakar**

General Manager - Indonesia

E: [witan@cuenrg.com](mailto:witan@cuenrg.com)

P : +62 21 527 5871

M : +62 811 843 768